HUG

HOUSTON USERS' GROUP

JULY 1984

PROP.of HUG
SET "A"
c/o R.Lumpkin
Houston Texas
713-469-5089

MEETING SCHEDULE
FIRST SUNDAY OF EVERY MONTH

(2ND SUNDAY IF 1ST SUNDAY IS ON A HOLIDAY WEEKEND)
2:00 P.M.

NEXT MEETING: SUNDAY, JULY 1, 1984

PRESIDENT'S COMMENTS

You know, since TI stopped production of the 99/4A, a number of positive things have happened. For exaaple, the number of books and publications about the 99/4A has increased dramatically. I have gone into several bookstores recently and counted twenty new books concerning our computer. There are at least three new assembly language books and the others run from general inforaation to programming, games & utility prograas. There are also books on Forth which apply to the 99/4A.

In addition to publications, a significant amount of new hardware is being introduced. Several companies are offering practically all of the hardware options that TI did, and there are some new items that were not available through TI. For instance, at least two companies are selling peripheral expansion boxes and disk controllers which can handle double-sided, double density diskettes. While I am listing some of the good things happening this year, let me also mention that some of the dealers who are also members of our group have obtained a relatively large number of new TI-99/4A consoles for sale. It might be worth considering if you need a back-up computer and possibly take advantage of the availability of these new units while they last

Last, but not least, I have found that this year has brought about more participants in our group activities than ever before. I have mentioned this several times previously but active participation by as many members as possible will be the main thing that will help our group to continue to grow and help the individual mem-bers. To those members who have been aand are active participants in group activities, thank you very much. Keep up the good work. To those who have not yet taken the step, let me say that we need you. You, too, can benefit yourself and the group as a whole by actively taking part in our activities.

See you at the next meeting on July 1.

Wayne Wright

THIS NEWSLETTER PUBLISHED MONTHLY BY THE HOUSTON USERS GROUP (TI HOME COMPUTERS). ANY OPINION OR ENDORSEMENT IS THAT OF THE AUTHOR, AND MAY NOT NECESSARILY REFLECT THE OFFICIAL OPINION OF 'HUG'. PERMISSION TO REPRINT GRANTED.

1984 HUG OFFICERS

President	- WAYNE WRIGHT	Treasurer	- DAVID HATHER
VP/Progras	- JANE McASHAN	Librarian	- BILL RISTER
VP/S.I.G.	- LARRY PIPKIN	Editor	- BILL KNECHT
Secretary	- SHARRON FOX	Exec. asst	- TOM JAY

*** RELATIONAL OPERATORS ***

an article on TI 99/4(A) programming
By: Curtis Garcia
10202 Forum Park Drive #310
Houston, Texas 77036
(713)774-6881

The *Relational Operator (RO)* is a powerful programming tool which is not well explained by TI in the 99/4(A) manual. I will attempt to explain what a *RO* is and it's possible applications in this article.

A *RO* is a relational expresssion such as X=5 or Y>A. I'm sure you've seen this type of expression in *IF-THEN-ELSE* statements. The purpose of this article is to show new applications for this type of statement, and ways to conserve program space by using *RO's.*

The first thing that must be understood is how the computer interprets it in a program. The computer effectively replaces a *RO* expression with either a 0 if the expression is FALSE, or a -1 if the expression is TRUE. It is this fact which gives the *RO* the potential to do so much for us in a program, as I will demonstrate in this article.

The simplest form of the *RO* is the simple IF statement:

```
200 IF X=5 THEN 390
```

Then there is the OR statement (for TI Basic):

```
200 IF (X<1)+(X>9)THEN 390
```

And, there is the AND statement (for TI Basic):

```
200 IF (X=5)*(Y<5)THEN 390
```

The above expressions are all simple *RO's.* In each case, the computer will evaluate the *RO* and, if the result is other than zero, perform the command that follows the *RO.* If the evaluation results in a value of zero, control passes to the next line in the program. As you can see in the OR statement example, there are two relationships expressed, with a + between them. This causes the results of the evaluations to be added together. If the total is not zero (one or more of the expressions are TRUE), the command that follows is executed.

In the AND statement example, the results of the evaluations are multiplied. Thus, if either expression were FALSE, the total expression would also be FALSE (0)*(-1)=0 and control would pass to the next line. If both of these were TRUE, the result of the evaluation is not zero (-1)*(-1)=1 and the command that follows the *RO* would execute.

We've looked at the simplest application of the *RO* now. In Extended Basic you should use the OR and AND commands that are provided, since they are more space efficient than the methods shown above. In the next section I will show applications of *RO's* for Basic or Extended Basic with large potential savings of program space outside of the *IF-THEN-ELSE* statement.

The fact that the computer evaluates and equates *RO's* as a 0 if FALSE, and a -1 if TRUE, has many other applications when programming either in TI Basic or Extended Basic. Consider the following equivalent statements:

```
190 X=X+1
200 IF X<5 THEN 220
210 X=0
```

The above can be replaced with the statement below using a *RO*:

```
190 X=X+1+5*(X=4)
```

The above *RO* looks at the value of X BEFORE BEING MODIFIED BY THE CURRENT LINE. So, if X is 4, the *RO* is TRUE(-1), and the 5*(X=4) evaluates to a -5, which is added to the first part of the expression; X=X+1. Thus, X=4+1+(-5)=0.

This is the power of the *RO*, that you can set up relationships almost anywhere in your program, that can save memory space. The *RO* cannot be used in DIM statements or OPTION BASE statements, but may be used in all other programming applications where a numeric value is expected. These inclue FILE NUMBERS, CALL COLOR, HCHAR, VCHAR, DISPLAY, RECORD NUMBERS (in a file), FOR-NEXT LOOPS, ect.

A very graphic example of the space savings possible with *RO's* is shown in the following equivalent examples. In each case, a CALL KEY statement is used to detect any of the four arrow keys, which are being used to set the X and Y values. The X and Y values represent the row and column locations of a graphic character, with its travel limited to rows 1 thru 24 and columns 3 thru 30.

```
200 CALL  KEY(0,KEY,STATUS)
210 IF STATUS=0 THEN 200
220 IF KEY=68 THEN 260
230 IF KEY=69 THEN 300
240 IF  KEY=83 THEN 340
250 IF KEY=88 THEN 380 ELSE 200
260 Y=Y+1
270 IF Y<31 THEN 500
280 Y=30
290 GOTO 500
300 X=X-1
310 IF  X>0 THEN 500
320 X=1
330 GOTO 500
340 Y=Y-1
350 IF  Y>2 THEN 500
360 Y=3
370 GOTO 500
380 X=X+1
390  IF X<25 THEN 500
400 X=24
410 GOTO 500
```

The above can be replaced with the following equivalent statements:

```
200 CALL KEY(0,KEY,STATUS)
210 IF (KEY<>68)*(KEY<>69)*(KEY<>83)*(KEY<>88)THEN 200
220 Y=Y+(KEY=68)*(Y<30)-(KEY=83)*(Y>3)
230 X=X+(KEY=88)*(X<24)-(KEY=69)*(X>1)
240 GOTO 500
```

The above example uses the relational AND to check both the KEY and the value of the variable (either X or Y) BEFORE MODIFICATION; this prevents the variable from being modified to a value outside the desired range. You will notice that if either of a pair of *RO's* with a * between them is FALSE, the result is zero, so no change is made to the variable. Remember, when using the relational AND, if TRUE, the value is +1. If using the relational IF, the value is -1 if TRUE, so watch the signs you place in front of the *RO's* to get the desired results.

PROGRAM

TITLE SCREEN

```
1 REM ++++++++++++++++++++++
2 REM +++++TITLE SCREEN+++++
3 REM +++HUG LIBRARY 4/84+++
4 REM ++++BY MARK CHANCE++++
5 REM +++++ABOUT 2K LONG++++
6 REM
7 CALL CLEAR :: FOR A=65 TO
90 :: CALL CHARPAT(A,A$):: C
ALL CHAR(A,SEG$(A$,3,10)
&SEG$(A$,11,2)&SEG$(A$,13,6)
):: NEXT A
8 FOR A=48 TO 57 :: CALL CHA
RPAT(A,A$):: CALL CHAR(A,SEG
$(A$,3,4)&SEG$(A$,5,2)&S
EG$(A$,7,10)):: NEXT A
9 REM CC=SCREEN COLOR
10 CC=8
11 DIM R(15),Q(8):: CALL CHA
RPAT(45,ZZ$):: CALL CHAR(94,
ZZ$):: CALL CHAR(137,"0"
):: CALL CHAR(64,"3C4299A1A1
99423C"):: CALL CHAR(40,"0")
12 DATA 2,9,10,11,12,13,14
13 RESTORE 12 :: FOR A=1 TO
7 :: READ B :: Q(A)=B :: NEX
T A :: RESTORE 14 :: FOR
 A=1 TO 14 :: READ B :: R(A)
=B :: NEXT A
14 DATA 7,4,2,12,13,14,16,5,
3,14,9,15,10,11
15 IF CC<>8 THEN GOSUB 30
16 DATA 40,96,104,112,120,12
8,136
17 FOR A=1 TO 14 :: CALL COL
OR(A,1,1):: NEXT A :: RESTOR
E 16 :: FOR A=1 TO 6 ::
READ B :: CALL CHAR(B+1,"0")
:: NEXT A
18 RESTORE 16 :: U=2 :: FOR
A=1 TO 7 :: READ B :: FOR C=
1 TO 2 :: CALL VCHAR(1,U
,B,3):: U=U+1 :: NEXT C :: F
OR C=3 TO 4 :: CALL VCHAR(1,
U,B+1,3):: U=U+1 :: NEXT
 C
19 NEXT A :: CALL VCHAR(1,30
,40,3):: CALL VCHAR(1,31,40,
3)
20 RESTORE 16 :: U=2 :: FOR
A=1 TO 7 :: READ B :: FOR C=
1 TO 2 :: CALL VCHAR(19,
U,B,3):: U=U+1 :: NEXT C ::
FOR C=3 TO 4 :: CALL VCHAR(1
9,U,B+1,3):: U=U+1 :: NE
XT C
21 NEXT A :: CALL VCHAR(19,3
0,40,3):: CALL VCHAR(19,31,4
0,3)
22 FOR A=3 TO 8 :: CALL COLO
R(A,2,1):: NEXT A :: CALL CO
LOR(1,2,1)
23 RESTORE 16 :: FOR A=1 TO
7 :: READ B :: CALL CHAR(B,"
FFFFFFFFFFFFFFFF"):: NEX
T A
24 F=1 :: FOR A=1 TO 14 STEP
 2 :: CALL COLOR(Q(F),R(A),R
(A+1)):: F=F+1 :: NEXT A
25 DISPLAY AT(10,7):"YOUR TI
TLE HERE"
26 DISPLAY AT(17,2)BEEP:"REA
DY^HIT ANY KEY TO BEGIN" ::
DISPLAY AT(23,6):"@1983
MARK CHANCE"
27 CALL KEY(3,X,Y):: IF Y=0
THEN 27
28 CALL CLEAR :: CALL CHARSE
T
29 GOTO 32
30 FOR A=1 TO 14 :: IF R(A)=
CC THEN R(A)=8 :: CALL SCREE
N(CC)
31 NEXT A :: RETURN
32 REM ++++END OF HEADER++++
```

HUG GOING ON-LINE with BBS

At the June meeting, the membership voted funds to expand our system and set up a club operated Bulliten Board. Since the *TI ZONE* had relocated in Indonesia, TI users felt left out without a local system. If you don't know, a Bulliten Board is a computer you call via telephone/modem and leave comments, ask questions, give tips to others and other things. *TI ZONE* had about 2000 calls it's first month of operation. To access the Board you will need at least a console, RS232, TEII module and Modem. Come to the July meeting to hear about the progress. Maybe the phone number will be available!

If you have a suggestion for a name for the board let Jerry Illing (664-7059) or Stephen Foster (691-4545) know.

TENTATIVE PHONE NUMBER - 713-699-2073

JAY'S ROOST

We have now reached the summer months and many of you will be vacationing. Please keep HUG in mind and if you are in town on the first Sunday of July and/or August come and support your group. Remember, St. John's has a/c and you will be nice and cool.

I hope everyone will consider writing COMPUTE!, especially those who are subscribers. It is ridiculous that any magazine which supported TI would drop its support at a time when the readers need it most.

This summer at St. John's we are offering a typing/word processing course. The class is using 6 Apples and 9 TI 99/4A computers. There are six 8 day sessions and they are almost all full. This is a good example of what can be done with the TI computer. There is no doubt in my mind that more and more students will be using word processors for their papers in school. If you have pre-teens or older, check out the various word processors available for the TI and the printers that can be used. Although we have some teachers who will not accept a paper written on a dot-matrix printer, I have given them some memos written with one and they canot tell the difference. Besides the students using word processors, any teachers in our group can make good use of one too. I write all my tests with TI-Writer as well as many of my other school papers. I find it indispensable since I am not a typist. It sure makes corrections easy. Another item you may find useful is Multiplan. It can be used to keep track of your grades and do your averaging for you. If you have some programing experience, it is not hard to write your own program to keep your gradebook. For all the teachers and students in our group, remember that the summer is a good time to learn more about your computer and the things it can do.

Editor's note: "Compute!"'s address is:

Gary R. Ingersoll, President
COMPUTE! Magazine
P. O. Box 914
Farmingdale, NY 11737

ANNOUNCEMENTS

MEMBERSHIP ROSTERS: New membership rosters are now available. If you did not get a copy at the meeting, send a 20 cent SASE to Bill Knecht, 815 Yorkshire, Pasadena 77503.

FORTH: Information of FORTH is not presently being included in our newsletter since it is only of interest to 20% of the members. We have quite a bit of information available. We have 1)SCRN #72 CORRECTIONS, 2)Procedures for making BACK-UP COPIES OF PROTECTED DISKS, 3) DOUBLE-SIDED CONVERSION and 4) TWO PROGRAMS - a graphics demo and a actual clock. (by Ed York of Cincinatti U.G.) If you need copies of any of these, contact Bill Knecht @ 473-5713.

SOFTWARE

INFOCOM INFOCOM INFOCOM INFOCOM

A NEW DIMENSION IN TEXT ADVENTURES
by Mike Matula

The INFOCOM text adventure series which have been at the top of the best seller list is now available for the TI-99/4A!
All TI programs require: 32K Memory Expansion, Disk Drive, and one of the following - Extended BASIC; or Editor/Assembler; or Mini-Memory.

The ZORK trilogy, Infocom's classic underground odyssey, takes you into the extra ordinary environs of the Great Underground Empire. It's a world so vast and unique, it can offer new discoveries no matter how often you explore it, with challenges that change and revitalize the adventure each time you make your decent. ZORK I, II and III all share a common thread, yet each is a complete and seperate story unto itself - so you can play them in any sequence you choose.

ZORK I: The Great Underground Empire confronts you with perils and predicaments ranging from the mystical to the macabre, as you strive to discover the Twenty Treasures of ZORK and escape with them and your life.

List: $39.95

ZORK II: The Wizard of Frobozz takes you into the new depths of the sub-terrean realm. There you'll meet the Wizard, who will attempt to confound your quest with his capricious powers.

List: $39.95

ZORK III: The Dungeon Master is the test of your wisdom and courage. Your odyssey culminates in an encounter with the Dungeon Master himself, and your destiny hangs in the balance.

List: $39.95

STARCROSS It's the year 2186. You are destined to rendezvous with a gargantuan starship from the outer fringes of the galaxy carrying an alien world, a complex puzzle, and a challenge that was issued eons ago, from light-years far away..one that only you can meet.

List: $39.95

DEADLINE A wealthy businessman has been found found dead in the library of his mansion from a drug overdose. Your task as the investigator is to follow clues, collect evidence and identify the murderer...before he does you in!

List: $49.95

INFIDEL You are marooned by your followers in the heart of the deadly Egyptian Desert. A soldier of fortune by trade, you've come hither in search of the great lost pyramid and its untold riches. Now, alone, you must locate and gain entry to the tomb, decipher hieroglyphs, and unravel its mysteries one by one. Through the Antechamber, the Barge Room, the Chamber of Ra, death will lick at your heels as you race to the shattering climix of this match of wits between you and the most ingenious architects, builders, and cutthroats of all time..the ancient Egyptians.

List: $49.95

INFOCOM(cont'd)

WITNESS A whodoneit thriller of the thirties with you as the dectective. It's a case of blackmail that turns into murder before your eyes, and anyone from the knockout heiress to the poker-faced Oriental butler could be the killer. As in DEADLINE, your suspects act with minds of their own, and you have just 12 hours to solve the crime. Armed with a police file packed with crucial physical evidence, you face the tangled web of clues, motives, and alibis, and the only testimony you can trust is that of your own eyes...because YOU are The WITNESS.

List: $49.95

ENCHANTER Journey into the world of magical powers. You are a novice magician whom Fate has chosen to do single-handed combat with a dark and fierce power. But worldly weapons will avail you naught, for your foe is the Evil Warlock who holds sway over the land. To defeat him, you will have to match your skills as a necromancer against his, using spells you have learned from your masters in the Circle of Enchanters and others you will acquire as you proceed on your quest. If you succeed, you will be elevated to a seat in the illustrious Circle; if you fail...but one does not speak of such things.

List: $49.95

SORCERER A cryptic diary is all that remains in the sanctum of Belboz The Necromancer, grand and powerful leader of the Guild of Enchanters. To rescue the kingdom and locate your mentor, you must gain the powers of a true SORCERER. A sequel to ENCHANTER.

List: $49.95

SUSPENDED You are buried alive in a cryogenic capsule deep inside an alien world. When an earthquake disrupts the systems of the Underground Complex you inhabit...systems that surface life depends on...you must stabilize conditions. However, you can only do so by commanding your six robots, each of whom perceives the world differently, to perform actions for you. If you save your world from utter destruction, you've just begun. SUSPENDED is designed to be replayed numerous times as you learn to optimize your strategies. You can also go on to two more levels of play, and there's even an option that lets you customize the game.

List: $49.95

PLANETFALL You are teleported forward a hundred centuries to a Stellar Patrol ship of the Third Galactic Union, where your rank is Ensign 7th Class...about as low as you can go. But then your luck takes a turn for the better. Your ship explodes. Which really is fortunate, because you're thereupon jettisoned away to a mysterious, deserted world. True, the planet is plagued by floods, pestilence, and a mutant Wild Kingdom. But there's also Floyd, a mischievous multipurpose robot and the ideal companion with whom to brave your new world as you explore its secrets, dare its dangers, and attempt to discover a means of saving it.

List: $49.95

If you get frustrated trying to work these text adventures out, Infocom has InvisiClues booklets for each game. Clues range from hints to full answers in each booklet and are written in invisible ink. The player uses the developing marker included with the booklet to make the selected clues visible. Also available are blueprints for the detective games and guide maps for the other adventure games.
The INFOCOM adventures are more sophisticated than the SCOTT ADAMS adventures. One can enter one or more sentences at a time when making your moves. Also, if one has a printer, you can have a transcript of the game printed as you make your moves. As in the SCOTT ADAMS adventures, you can save your game and continue it at a later time.

HUG LIBRARY

THANKS TO THE EFFORTS OF OUR MEMBERS, THE SIZE OF YOUR LIBRARY HAS GROWN 65% IN THE LAST TWO MONTHS. MOST OF THE PROGRAMS ARE GAMES AND MUSIC. HOWEVER, WE ARE LIMITED IN THE SELECTION OF BUSINESS AND EDUCATIONAL PROGRAMS. SURPRISINGLY, WE HAVE ONLY ONE ASSEMBLY LANGUAGE PROGRAM, TWO LOGO PROGRAMS WHICH HAVE NOT YET BEEN DEBUGGED, AND NO PASCAL PROGRAMS. SURELY SOME OF OUR MEMBERS WRITE IN LANGUAGES OTHER THAN BASIC AND EXTENDED BASIC!

SOME OF THE RECENTLY SUBMITTED PROGRAMS AARE COPYRIGHTED. PLEASE REMEMBER THAT ANY PROGRAM COPIED FROM A PUBLICATION OR SOLD COMMERCIALLY IS COPYRIGHTED AND HUG CANNOT ACCEPT A COPYRIGHTED PROGRAM UNLESS THE COPYRIGHT HOLDER GRANTS PERMISSION IN WRITING.

HAVE YOU WRITTEN A PROGRAM OR INTERPRETED A PROGRAM ORIGINALLY WRITTEN FOR ANOTHER MACHINE OR LANGUAGE? OR DO YOU POSSESS A PUBLIC DOMAIN PROGRAM NOT IN OUR LIBRARY? WHY NOT SHARE IT WITH YOUR FELLOW HUG MEMBERS AND PICK-UP ON FOUR PROGRAMS IN RETURN?

-BILL RISTER

REVIEW

When you have been sitting at the console several hours programming and you are getting tired, just load in the program 518 WESTERN BOOGIE (XB) and let it play. This song will definitely get you blood circulating again. A song worth having in your collection.

On the other hand if you need to relax, 508 MORNING (XB) offers soothing music and great graphics.

No library should be without SAM MOORE'S 519 PLAYER PIANO, one of the best graphic illustrations I've seen.

-Bill Knecht

EDITOR'S ROM

In this day in time when many of us are still upset about TI dropping production of the 99/4A, when we wait several months to get a magazine that should come out monthly, when another magazine is running 2 months late (getting the March issue in May) and when another magazine's support of the TI-99/4a has went kaput (*pun intended*), it is nice to be able to say some GOOD THINGS about a company.

STAR Micronics, maker of the GEMINI printers, supports its users! They have come out with the promised TI Addendum for their User Refernece Guide. But there's another reason I made the above statement. My printer was dropping part of the first letter it printed and when I called STAR Micronics Support Group, they said the head was defective and though past the warranty date, that they would send me a new head at no charge.

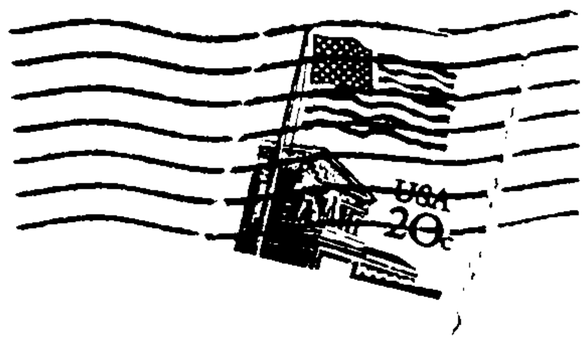
It took about two months to get the new printhead, but three minutes later, the printer was working perfect. If you have any trouble with you Gemini printer or need a copy of the Addendum, contact:

STAR Micronics
No. 3 Oldfield
Irvine, CA 92714
Phone: (714) 768-4340

This is a great company to do business with. I give them a 5 star rating.

Bill W. Knecht
815 Yorkshire
Pasadena, Tx. 77503

PASADENA, TX
JUN 21
PM
1984



FIRST CLASS MAIL

Sanford & Ruth Herman
6219 Sanford Road
Houston Tx 77096